



DUKES COUNTY RETIREMENT SYSTEM

ACTUARIAL VALUATION as of

January 1, 2014

Prepared by:

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December 18, 2014

Dukes County Retirement Board
9 Airport Road
Suite 1
Vineyard Haven, MA 02568

Dear Board Members:

We are pleased to present the enclosed report summarizing the results of our actuarial valuation of the Dukes County Retirement System as of January 1, 2014.

Our valuation was performed in accordance with the provisions contained in Chapter 32 of the Massachusetts General Laws, "M.G.L.", as of January 1, 2014 and GASB Statement No. 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans (GASB 25) and GASB Statement No. 27, Accounting for Pensions by State and Local Governmental Employers (GASB 27).

The principal results of our valuation are summarized in Section 2. The summary of Plan provisions and actuarial methods and assumptions are shown in Sections 5 and 6, respectively. Section 7 summarizes the demographic profile of active members and retired plan members. Asset information and actuarial liabilities are presented in Section 2. The development of the required appropriations pursuant to Chapter 32 of the M.G.L. is shown in Section 3. The required disclosures under GASB 25, GASB 27 and PERAC are presented in Section 4.

We also provide a 30-year forecast of the required appropriations and cash flows in Section 3.

Our actuarial valuation is based on an investment return rate of 7.75%, compounded annually. Our calculations were based on participant census and asset data and other information provided by the Dukes County Retirement System and the benefit provisions of Chapter 32 of the M.G.L. as of January 1, 2014.

K M S A C T U A R I E S

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Our valuation follows generally accepted actuarial methods and we perform such tests as we consider necessary to assure the accuracy of the results. The amounts presented in this report have been appropriately determined according to the actuarial assumptions and methods stated herein.

We appreciate this opportunity to be of service to the Dukes County Retirement Board. We are available to answer any questions with respect to our valuation.

Respectfully submitted,

A handwritten signature in black ink that reads "Linda Bournival". The signature is written in a cursive, flowing style.

Linda L. Bournival, FSA
Member, American Academy of Actuaries

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ACTUARIAL CERTIFICATION

This report presents the results of the Actuarial Valuation for the Dukes County Retirement System as of January 1, 2014. The report presents the funding schedule contribution amounts for the fiscal years beginning 2015 and accounting and financial reporting information in accordance with Statement Numbers 25 and 27 of the Governmental Accounting Standards Board.

This valuation is based upon member data provided by the Retirement Board and asset information reported to the Public Employee Retirement Administration Commission (PERAC) by the Dukes County Retirement System. Although we did not audit the data used in the valuation, we believe that the information is complete and reliable.

This report was completed in accordance with generally accepted actuarial standards and procedures, and conforms to the Code of Professional Conduct of the American Academy of Actuaries. The actuarial assumptions used in the determination of costs are reasonably related to the experience of the System and to reasonable expectations, and represent our best estimate of anticipated long-term experience under the System.

Future actuarial valuation results may differ significantly from the current results presented in this report. Examples of potential sources of volatility include plan experience differing from that anticipated by the economic or demographic assumptions, the effect of new entrants, changes in economic or demographic assumptions, the effect of law changes and the delayed effect of smoothing techniques.

This report is intended for the sole use of the Dukes County Retirement System and is intended to provide information to comply with the stated purpose of the report. It may not be appropriate for other purposes.

The undersigned credentialed actuaries are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein. They are available to answer any questions with regard to this report.

Respectfully submitted,



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SECTION 1 - SUMMARY

Background

We have completed the Actuarial Valuation of the Dukes County Retirement System as of January 1, 2014. This valuation is based upon census data provided by the Retirement Board and asset information reported to the Public Employee Retirement Administration Commission (PERAC) by the Dukes County Retirement Board. Information for the prior valuation completed as of January 1, 2011 was obtained from the valuation report prepared by Buck Consultants.

Massachusetts General Laws

The valuation was prepared in accordance with Chapter 32 of the Massachusetts General Laws ("M.G.L."). The results are based on the active, inactive and retired members and beneficiaries as of January 1, 2014, the assets as of December 31, 2013 and assumptions regarding investment returns, salary increases, death, turnover, disability and retirement.

The valuation does not take into consideration:

- Changes in the law after the valuation date,
- State-mandated benefits and
- Cost-of-living increases granted to members in pay status between 1982 and 1997.

GASB Statement Numbers 25 and 27

The Governmental Accounting Standards Board (**GASB**) is responsible for establishing accounting standards for governmental entities. Calculations developed in accordance with GASB standards are required when providing financial statements.

GASB Statement Number 25 (**GASB 25**) establishes financial reporting standards for defined benefit pension plans of state and local governmental entities. The Statement establishes a framework that distinguishes between two categories of information: current financial information about plan assets and financial activities and actuarially determined information about the funded status of the plan and the progress being made in accumulating sufficient assets to pay benefits when due.

GASB Statement Number 27 (**GASB 27**) establishes standards for the measurement, recognition, and display of pension expense and related liabilities, assets, note disclosures, and, if applicable, required supplementary information in the financial reports of state and local governmental employers. Employers are required to measure and disclose an amount for annual pension cost on the accrual basis of accounting, regardless of the amount recognized as pension expense on the accrual basis. Annual pension cost should be equal to the employer's Annual Required Contribution (ARC) to the plan.

The required disclosures under the GASB Statements are presented in Section 4.

SECTION 1 - SUMMARY

GASB Statement Numbers 67 and 68

In June 2012, the GASB approved two related Statements that significantly change the way pension plans and governments will account and report pension liabilities. Effective for plans with fiscal years beginning after June 15, 2013, GASB Statement No. 67, Financial Reporting for Pension Plans, replaces the requirements of Statement No. 25 and effective for employers with fiscal years beginning after June 15, 2014, GASB Statement No. 68, Accounting and Financial Reporting for Pensions, replaces the requirements of Statement No. 27.

The new pension standards reflect changes from those currently in place regarding how governments calculate total pension liability and pension expense. Further, the new standards contain requirements for disclosing information in the notes to financial statements and presenting required supplementary information following the notes.

The required disclosures and notes under the new GASB Statements for the fiscal year ending December 31, 2014 will be provided in a separate report.

Actuarial Valuation

During the three years since the last valuation, the total unfunded actuarial accrued liability of the System was expected to decrease from \$36,369,414 as of January 1, 2011 to \$30,603,957 as of January 1, 2014, for a total decrease of \$5,765,457. The actual unfunded actuarial accrued liability, before any assumption or plan changes, was \$36,961,703, resulting in an actuarial loss of \$6,357,746. The actuarial loss was primarily due to an asset loss of \$5,520,054 and a demographic experience loss of \$837,692. The details of the gain and loss analysis are provided in Exhibit 2.6.

Appropriations

The funding appropriation for each year is computed as the sum of the normal cost and an amortization payment to pay off the Unfunded Actuarial Liability, adjusted for semi-annual payments of the appropriation made at the beginning of each fiscal year. The appropriation calculated as of the January 1, 2014 valuation is \$5,308,032, and is made up of a normal cost payment of \$1,668,116, net 3(8)(c) transfers of \$165,501 and an amortization payment of \$3,474,415. The amortization method is an increasing amortization of the unfunded actuarial accrued liability at 4.5% over 16 years (14 years for the ERIs) and is expected to fully pay the unfunded actuarial accrued liability by the year 2030 (2028 for the ERIs). The development of the appropriation as of January 1, 2014 is presented in Exhibit 3.1.

For fiscal year 2015, we show the actual appropriation developed under the previous funding schedule and reported on the PERAC "Required Fiscal Year 2015 Appropriation" letter dated December 2, 2013 of \$5,601,553. For fiscal year 2016, we developed an annual appropriation of \$5,849,546, which is made up of a normal cost of \$1,834,412, net 3(8)(c) transfers of \$175,000 and payment toward the unfunded actuarial accrued liability (including ERIs) of \$3,840,134. The unfunded actuarial accrued liability is expected to be fully paid by 2030. The current funding schedule is shown in Exhibit 3.2.

SECTION 1 - SUMMARY

A summary of principal valuation results from the current valuation and the prior valuation follows. Changes in actuarial assumptions and methods and Plan provisions are discussed below, as well as changes in census data and asset information.

Valuation Date	<u>1/1/2014</u>	<u>1/1/2011</u>	<u>Increase/ (Decrease)</u>
Summary of Member Data			
Active Members	629	602	4.5%
Average Age	49.0	49.0	0.0%
Average Service	11.1	10.2	8.8%
Annual Compensation	\$34,859,969	\$29,118,456	19.7%
Average Annual Compensation	\$55,421	\$48,370	14.6%
Retired Members and Beneficiaries	238	215	10.7%
Average Age	70.7	N/A	N/A
Total Annual Pension	\$4,715,906	N/A	N/A
Average Annual Pension	\$19,815	N/A	N/A
State Reimbursed COLAs	\$29,220	N/A	N/A
Total System-Funded Pension	\$4,686,686	\$3,829,400	22.4%
Disabled Members	23	21	9.5%
Average Age	61.0	N/A	N/A
Total Annual Pension	\$852,623	N/A	N/A
Average Annual Pension	\$37,071	N/A	N/A
State Reimbursed COLAs	\$1,755	N/A	N/A
Total System-Funded Pension	\$850,868	\$743,310	14.5%
Inactive Members	126	116	8.6%
Annuity Savings Fund	1,325,950	\$983,491	34.8%
Actuarial Accrued Liability (AAL)	\$141,568,416	\$110,358,557	28.3%
Assets			
Market Value of Assets	\$103,538,933	\$70,530,179	46.8%
Actuarial Value of Assets	97,171,632	73,989,143	31.3%
Unfunded Accrued Liability	\$44,396,784	\$36,369,414	22.1%
Funded Status	68.6%	67.0%	2.4%
Normal Cost			
Employer	\$1,363,116	\$1,570,240	(13.2%)
Employee	3,301,367	2,517,778	31.1%
Administrative Expenses	305,000	0	N/A
Total Normal Cost	\$4,969,483	\$4,088,018	21.6%

Dukes County Retirement System
Actuarial Valuation as of January 1, 2014

SECTION 1 - SUMMARY

Valuation Date	<u>1/1/2014</u>	<u>1/1/2011</u>	<u>Increase/ (Decrease)</u>
Appropriations			
Fiscal Year 2014	N/A	\$5,351,220	N/A
Fiscal Year 2015	\$5,601,553	\$5,601,553	0.0%
Fiscal Year 2016	\$5,849,546	\$5,863,628	(0.2%)
Fiscal Year 2017	\$6,095,727	\$6,137,996	(0.7%)

Actuarial Assumptions and Methods

Many Actuarial Assumptions and Methods used in this valuation have been changed since the last valuation, including a reduction to the investment return rate from 8% to 7.75%, mortality improvement applied to the mortality rates, lower annual rates of salary increases and payroll growth rate reduction from 5% to 4%. Changing these assumptions resulted in a net increase in the unfunded actuarial accrued liability of \$6,123,759 and an increase in the employer normal cost of \$129,576. The Actuarial Assumptions and Methods utilized in this valuation are detailed in Section 6, Actuarial Assumptions and Methods.

Plan Provisions

Chapter 176 of the Acts of 2011 was incorporated in this valuation, which changes many of the benefit features for members hired on or after April 2, 2012. In addition, the COLA base was increased to \$13,000 effective July 1, 2012 and \$14,000 effective July 1, 2013. The unfunded actuarial accrued liability and the employer normal cost increased by \$1,311,322 and \$40,376, respectively, as a result of these changes. The Plan provisions utilized in this valuation are detailed in Section 5, Summary of Plan Provisions.

Census Data

As of January 1, 2014, there are 629 active members who may be eligible for benefits in the future, 238 retirees and beneficiaries, 126 inactives and 23 disabled retirees. Summaries of the active, retired and disabled employees are included in Section 7, Demographic Information.

Assets

This valuation is based upon asset information reported to the Public Employee Retirement Administration Commission (PERAC) by the Dukes County Retirement Board. The market value of assets increased from \$70,530,179 as of January 1, 2011 to \$103,538,933 as of January 1, 2014. During the plan years ended 2011, 2012 and 2013, the rates of return on the market value of assets were 2.38%, 11.12% and 16.34%, respectively.

The actuarial value of assets increased from \$73,989,143 as of January 1, 2011 to \$97,171,632 as of January 1, 2014. During the plan years ended 2011, 2012 and 2013, the rates of return on the actuarial value of assets were 3.08%, 3.60% and 11.05%, respectively.

SECTION 2 - PRINCIPAL VALUATION RESULTS

Exhibit 2.1 - Plan Assets

Asset information is reported annually to the Public Employee Retirement Administration Commission by the Dukes County Retirement System. The Market Value of Assets for the two most recent calendar years are as follows:

Calendar Year	2013	2012	2011
Trust Fund Composition at Year-End			
Cash	\$3,363,708	\$4,465,122	\$2,689,823
Short-Term Investments	700,000	700,000	700,000
Fixed Income Securities	850	850	850
Equities	20,825,444	7,839,150	7,210,780
Pooled Short Term Funds	0	0	0
Pooled Domestic Equity Funds	11,580,318	16,185,300	14,109,713
Pooled International Equity Funds	3,805,207	3,063,651	1,393,841
Pooled Global Equity Funds	0	0	0
Pooled Domestic Fixed Income Funds	12,068,297	11,772,798	11,084,029
Pooled International Fixed Income Funds	0	0	0
Pooled Global Fixed Income Funds	0	0	0
Pooled Alternative Investments	0	0	0
Pooled Real Estate Funds	6,110,325	4,089,630	3,593,235
Pooled Domestic Balanced Funds	0	0	0
Pooled International Balanced Funds	0	0	0
Hedge Funds	0	0	0
PRIT Cash	0	0	0
PRIT Fund	43,848,250	37,436,893	33,003,763
Interest Due & Accrued	0	0	0
Prepaid Expenses	0	0	0
Accounts Receivable	1,586,905	1,159,184	1,208,219
Land	0	0	0
Buildings	0	0	0
Accumulated Depreciation - Buildings	0	0	0
Accounts Payable	(350,371)	(15,265)	(34,030)
Total Market Value of Assets	<u>\$103,538,933</u>	<u>\$86,697,313</u>	<u>\$74,960,223</u>

SECTION 2 - PRINCIPAL VALUATION RESULTS

Exhibit 2.1 - Plan Assets

Calendar Year	2013	2012	2011
Funds			
Annuity Savings Fund	\$29,167,729	\$26,971,466	\$24,897,405
Annuity Reserve Fund	6,616,301	6,195,852	6,049,710
Military Service Fund	13,386	3,399	3,396
Pension Fund	442,958	770,827	319,395
Expense Fund	0	0	0
Pension Reserve Fund	67,298,559	52,755,769	43,690,317
Total Market Value of Assets	<u>\$103,538,933</u>	<u>\$86,697,313</u>	<u>\$74,960,223</u>
Asset Activity			
Market value as of Beginning of Year	\$86,697,313	\$74,960,223	\$70,530,179
Contributions and Receipts	9,314,859	9,253,780	8,370,378
Benefit Payments and Expenses	(6,843,013)	(6,031,493)	(5,652,711)
Investment Return	14,369,774	8,514,803	1,712,377
Market Value as of End of Year	<u>\$103,538,933</u>	<u>\$86,697,313</u>	<u>\$74,960,223</u>
Computed Rate of Return	16.34%	11.12%	2.38%

Returns and annualized past returns developed by PERAC are shown below. Information is obtained from the Annual Investment Reports published by PERAC for the years shown.

Year	1-Year Return	5-Year Return	Return (Since 1985)
2013	17.14%	12.23%	7.84%
2012	11.75%	2.97%	7.52%
2011	2.83%	2.91%	7.36%
2010	14.19%	5.17%	7.54%
2009	15.84%	3.90%	7.29%
2008	-23.83%	2.80%	6.94%
2007	11.43%	11.94%	8.53%
2006	14.59%	8.19%	8.40%
2005	7.45%	4.00%	8.12%
2004	9.83%	2.23%	8.15%

SECTION 2 - PRINCIPAL VALUATION RESULTS

Exhibit 2.1 - Plan Assets

Valuation Date	1/1/2014	1/1/2013	1/1/2012
1. Market Value of Assets as of prior January 1	\$86,697,313	\$74,960,223	\$70,530,179
a. Prior Year Contributions and Receipts	9,314,859	9,253,780	8,370,378
b. Prior Year Benefit Payments and Expenses	(6,843,013)	(6,031,493)	(5,652,711)
c. Expected Investment Return Rate	8.000%	8.000%	8.000%
d. Expected Investment Return	7,034,659	6,125,709	5,751,121
e. Expected Market Value of Assets as of Valuation Date	\$96,203,818	\$84,308,219	\$78,998,968
2. Prior Year Gain / (Loss)			
a. Market Value of Assets as of January 1	\$103,538,933	\$86,697,313	\$74,960,223
b. Expected Market Value of Assets	96,203,818	84,308,219	78,998,968
c. Prior Year Gain / (Loss)	7,335,115	2,389,094	(4,038,745)
3. Phase-In of Asset Gains and Losses			
	Unrecognized	Unrecognized	Unrecognized
Plan Year	Gain / (Loss)	Gain / (Loss)	Gain / (Loss)
a. 2013	\$7,335,115	\$5,868,092	\$0
b. 2012	2,389,094	1,433,456	-
c. 2011	(4,038,745)	(1,615,498)	(3,230,996)
d. 2010	3,406,255	681,251	2,043,753
e. 2009	3,453,458	-	1,381,383
f. 2008	(21,321,012)	-	(4,264,202)
g. Total deferred gains/(losses)	6,367,301	1,541,222	(4,070,062)
4. Actuarial Value of Assets			
a. Market Value of Assets Less Unrecognized Gain / (Loss)	\$97,171,632	\$85,156,091	\$79,030,285
b. 80% of Market Value of Assets	82,831,146	69,357,850	59,968,178
c. 120% of Market Value of Assets	124,246,720	104,036,776	89,952,268
d. Actuarial Value of Assets, a., but not less than b. and not greater than c.	\$97,171,632	\$85,156,091	\$79,030,285
e. Ratio of Actuarial Value of Assets to Market Value of Assets	93.85%	98.22%	105.43%
5. Rate of Return on Actuarial Value of Assets for Prior Calendar Year	11.05%	3.60%	3.08%

SECTION 2 - PRINCIPAL VALUATION RESULTS

The **Actuarial Present Value of Future Benefits** is the present value of the cost to finance all benefits payable in the future, discounted to reflect the probability of payment and the time value of money. Below is the Actuarial Present Value of Future Benefits from the current valuation and the prior valuation:

Exhibit 2.2 - Actuarial Present Value of Future Benefits

Valuation Date	<u>1/1/2014</u>	<u>1/1/2011</u>
Actives		
Superannuation	\$104,578,563	\$81,220,444
Termination	3,883,742	3,206,772
Death	3,894,315	4,028,812
Disability	9,664,102	8,134,010
Total Actives	<u>\$122,020,722</u>	<u>\$96,590,038</u>
Retired Members and Inactives		
Retired Members and Beneficiaries	\$47,179,510	\$37,954,197
Disabled Members	9,828,568	7,921,797
Inactive Members	1,325,950	983,491
Total Retired Members and Inactives	<u>\$58,334,028</u>	<u>\$46,859,485</u>
Total Present Value of Future Benefits	\$180,354,750	\$143,449,523

The **Actuarial Accrued Liability** is the portion of the Actuarial Present Value of Future Benefits which is allocated to all periods prior to a valuation year and therefore is not provided for by future Normal Costs. Below is the Actuarial Accrued Liability from the current valuation and the prior valuation:

Exhibit 2.3 - Actuarial Accrued Liability

Valuation Date	<u>1/1/2014</u>	<u>1/1/2011</u>
Actives		
Superannuation	\$75,295,436	\$57,100,581
Termination	2,796,252	1,486,187
Death	1,742,021	2,236,493
Disability	3,400,679	2,675,811
Total Actives	<u>\$83,234,388</u>	<u>\$63,499,072</u>
Retired Members and Inactives		
Retired Members and Beneficiaries	\$47,179,510	\$37,954,197
Disabled Members	9,828,568	7,921,797
Inactive Members	1,325,950	983,491
Total Retired Members and Inactives	<u>\$58,334,028</u>	<u>\$46,859,485</u>
Total Actuarial Accrued Liability	\$141,568,416	\$110,358,557

Dukes County Retirement System
Actuarial Valuation as of January 1, 2014

SECTION 2 - PRINCIPAL VALUATION RESULTS

The **Normal Cost** is the portion of the Actuarial Present Value of Future Benefits which is allocated to a valuation year. Only active employees who have not reached Normal Retirement Age incur a Normal Cost. Below is the Normal Cost from the current valuation and the prior valuation:

Exhibit 2.4 - Normal Cost

Valuation Date	<u>1/1/2014</u>	<u>1/1/2011</u>
Actives		
Superannuation	\$3,104,515	
Termination	640,700	
Death	270,852	
Disability	648,416	
Total Actives	<u>\$4,664,483</u>	<u>\$4,088,018</u>
As a Percentage of Salary	13.4%	14.0%
Administrative Expenses	\$305,000	\$0
As a Percentage of Salary	0.9%	0.0%
Total Normal Cost		
Normal Cost	\$4,969,483	\$4,088,018
As a Percentage of Salary	14.3%	14.0%
Employee Normal Cost		
Employee Contributions	\$3,301,367	\$2,517,778
As a Percentage of Salary	9.5%	8.6%
Employer Normal Cost		
Employer Normal Cost	\$1,668,116	\$1,570,240
As a Percentage of Salary	4.8%	5.4%

Exhibit 2.5 - Unfunded Actuarial Accrued Liability

Valuation Date	<u>1/1/2014</u>	<u>1/1/2011</u>
Unfunded Actuarial Accrued Liability		
a. Actuarial Accrued Liability	\$141,568,416	\$110,358,557
b. Actuarial Value of Assets	97,171,632	73,989,143
c. Unfunded Actuarial Accrued Liability (a. - b.)	\$44,396,784	\$36,369,414
d. Funded Ratio (b. divided by a.)	68.6%	67.0%

SECTION 2 - PRINCIPAL VALUATION RESULTS

Exhibit 2.6 - Actuarial Experience

In performing the actuarial valuation, various assumptions are made regarding mortality, retirement, disability and withdrawal rates as well as salary increases and investment returns. A comparison of the results of the current valuation and the prior valuation is made to determine how closely actual experience relates to expected. During the three years since the last valuation, the total unfunded actuarial accrued liability of the System was expected to decrease by \$5,765,457. Below is the development of the Actuarial Gain or Loss for the current 3-year period:

Calendar Year Ending	<u>12/31/2013</u>	<u>12/31/2012</u>	<u>12/31/2011</u>
Expected Unfunded Actuarial Accrued Liability			
a. Unfunded Actuarial Accrued Liability, beginning of year	\$32,799,821	\$34,988,833	\$36,369,414
b. Normal cost, beginning of year	4,507,040	4,292,419	4,088,018
c. Total contributions	9,314,859	9,253,780	8,370,378
d. Interest (full year on a. and b., one-half year on c.)	2,611,955	2,772,349	2,901,779
e. Expected Unfunded Actuarial Accrued Liability	\$30,603,957	\$32,799,821	\$34,988,833
f. Unfunded Actuarial Accrued Liability (before changes)	\$36,961,703		
g. (Gain)/Loss	\$6,357,746		
Asset (gain)/loss			
a. Actuarial value of assets, beginning of year	85,156,091	79,030,285	\$73,989,143
b. Contributions and Receipts	9,314,859	9,253,780	8,370,378
c. Benefit Payments and Expenses	(6,843,013)	(6,031,493)	(5,652,711)
d. Assumed rate of return	8%	8%	8%
e. Expected return	6,911,361	6,451,314	6,027,838
f. Actuarial value of assets, end of year	97,171,632	85,156,091	79,030,285
g. Actual return	9,543,695	2,903,519	2,323,475
h. Actual rate of return	11.05%	3.60%	3.08%
i. Asset (gain)/loss	(\$2,632,334)	\$3,547,795	\$3,704,363
j. Total asset (gain)/loss, 3-year period	\$5,520,054		
Actual Unfunded Actuarial Accrued Liability			
a. Changes due to:			
i) Asset (gain)/loss	\$5,520,054		
ii) (Gain)/loss from demographic experience	837,692		
iii) (Gain)/loss prior to changes	6,357,746		
iv) Plan change - apply Chapter 176	-		
v) Plan change - increase COLA base	1,311,322		
vi) Assumption changes	4,087,394		
vii) Reduction to Investment Return	2,036,365		
viii) Total changes	13,792,827		
b. Unfunded Actuarial Accrued Liability, end of year	\$44,396,784		

SECTION 3 - CHAPTER 32 OF M.G.L. APPROPRIATIONS

Exhibit 3.1 - Annual Appropriations

The **Annual Appropriation** is determined in accordance with the requirements set forth in Section 22D of Chapter 32 of the Massachusetts General Laws ("M.G.L."). The appropriation is comprised of the annual employer normal cost and amortization payments to pay the unfunded actuarial accrued liability. Below are the details of the annual appropriation for the current valuation.

Amortization Payments	<u>1/1/2014</u>
a. Early Retirement Incentive (2002)	
Fully Funded Year	2028
Balance as of valuation date	\$1,518,727
Amortization Amount	\$131,372
Remaining Payment Period	14
b. Early Retirement Incentive (2003)	
Fully Funded Year	2028
Balance as of valuation date	\$524,311
Amortization Amount	\$45,354
Remaining Payment Period	14
c. Remaining Unfunded Actuarial Liability	
Fully Funded Year	2030
Balance as of valuation date	\$42,353,746
Amortization Amount	\$3,297,689
Remaining Payment Period	16
d. Total Amortization Payments	\$3,474,415
Normal Cost	\$1,668,116
Net 3(8)(c) Transfers	\$165,501
Total Appropriation as of January 1, 2014	\$5,308,032

SECTION 3 - CHAPTER 32 OF M.G.L. APPROPRIATIONS

Exhibits 3.2 and 3.3, are based on the assumptions below:

Exhibit 3.2:

- Payroll and Total Normal Cost are both expected to increase 4% per year.
- The Unfunded Actuarial Accrued Liability ('UAL') is computed as of January 1 of each year assuming no future gains or losses.
- The Amortization Payment of UAL is to be paid over 16 years through 2030.
- The Amortization Payments of the Early Retirement Incentive Programs ('ERI') are increasing amortizations at 4.5% of the UAL attributable to the ERI programs for 2002 and 2003 over 14 years.
- Net 3(8)(c) transfers are a level dollar amount based on the net transfers expected to be paid by the Dukes County Retirement Board during the current year offset by the amount received during the same period.
- Total Employer Cost is the sum of the Employer Normal Cost, the Amortization Payments of the UAL and the ERI programs and the Net 3(8)(c) Transfers, all computed as of January 1 of each year and adjusted for semi-annual payments made on July 1 and January 1.
- For fiscal year 2015, we show the actual appropriation developed under the previous funding schedule of \$5,601,553.

Exhibit 3.3:

- Expected benefit payments include payments expected to be made to retired members, beneficiaries, disabled members and active members expected to retire. In addition, expected benefit payments include distribution of the annuity savings fund attributed to inactive members.
- Benefit payments exclude cost-of-living increases granted to members in pay status between 1982 and 1997. In addition, benefit payments are as expected for the first ten years of the forecast, then increase by the greater of 4.50% per year thereafter or the expected future payments for the current population projected by our computer model.
- Calendar year cash flow entries are developed as of each January 1.

SECTION 3 - CHAPTER 32 OF M.G.L. APPROPRIATIONS

Exhibit 3.2 - 30-Year Forecast of Annual Appropriations

Fiscal Year Ending	Employer Normal Cost	Amortization Payment of UAL	Amortization Payment of ERI 2002	Amortization Payment of ERI 2003	Net 3(8)(c) Transfers	Total Employer Cost	Unfunded Actuarial Accrued Liability
2015	\$1,763,858	\$3,475,826	\$138,912	\$47,957	\$175,000	\$5,601,553	\$44,396,784
2016	1,834,412	3,644,856	145,163	50,115	175,000	5,849,546	44,105,198
2017	1,907,787	3,808,874	151,696	52,370	175,000	6,095,727	43,610,202
2018	1,984,100	3,980,274	158,522	54,727	175,000	6,352,623	42,900,753
2019	2,063,463	4,159,387	165,656	57,189	175,000	6,620,695	41,952,306
2020	2,146,002	4,346,558	173,110	59,763	175,000	6,900,433	40,738,056
2021	2,231,842	4,542,154	180,900	62,452	175,000	7,192,348	39,228,752
2022	2,321,116	4,746,551	189,040	65,262	175,000	7,496,969	37,392,484
2023	2,413,961	4,960,145	197,547	68,199	175,000	7,814,852	35,194,464
2024	2,510,519	5,183,352	206,436	71,268	175,000	8,146,575	32,596,782
2025	2,610,939	5,416,602	215,727	74,476	175,000	8,492,744	29,558,142
2026	2,715,377	5,660,350	225,435	77,826	175,000	8,853,988	26,033,587
2027	2,823,993	5,915,066	235,578	81,327	175,000	9,230,964	21,974,190
2028	2,936,952	6,181,243	246,181	84,988	175,000	9,624,364	17,326,727
2029	3,054,430	6,459,399	-	-	175,000	9,688,829	12,033,313
2030	3,176,606	6,750,073	-	-	175,000	10,101,679	6,383,680
2031	3,303,670	-	-	-	175,000	3,478,670	-
2032	3,435,817	-	-	-	175,000	3,610,817	-
2033	3,573,251	-	-	-	175,000	3,748,251	-
2034	3,716,179	-	-	-	175,000	3,891,179	-
2035	3,864,827	-	-	-	175,000	4,039,827	-
2036	4,019,421	-	-	-	175,000	4,194,421	-
2037	4,180,197	-	-	-	175,000	4,355,197	-
2038	4,347,405	-	-	-	175,000	4,522,405	-
2039	4,521,301	-	-	-	175,000	4,696,301	-
2040	4,702,154	-	-	-	175,000	4,877,154	-
2041	4,890,240	-	-	-	175,000	5,065,240	-
2042	5,085,850	-	-	-	175,000	5,260,850	-
2043	5,289,285	-	-	-	175,000	5,464,285	-
2044	5,500,855	-	-	-	175,000	5,675,855	-

Dukes County Retirement System
Actuarial Valuation as of January 1, 2014

SECTION 3 - CHAPTER 32 OF M.G.L. APPROPRIATIONS

Exhibit 3.3 - 30-Year Forecast of Cash Flow

Calendar Year	Assets, BOY	Benefit Payments	Employee Contributions	Employer Contributions	Investment Return	Assets, EOY
2014	\$103,538,933	\$7,914,039	\$3,301,367	\$5,297,502	\$8,384,011	\$112,607,774
2015	112,607,774	7,251,527	3,433,422	5,532,034	9,140,929	123,462,632
2016	123,462,632	8,039,498	3,570,759	5,764,852	9,980,333	134,739,078
2017	134,739,078	8,811,023	3,713,589	6,007,802	10,854,259	146,503,705
2018	146,503,705	9,667,792	3,862,133	6,261,325	11,763,978	158,723,349
2019	158,723,349	10,421,509	4,016,618	6,525,880	12,714,270	171,558,608
2020	171,558,608	11,218,697	4,177,283	6,801,949	13,711,958	185,031,101
2021	185,031,101	11,978,626	4,344,374	7,090,035	14,761,905	199,248,789
2022	199,248,789	12,760,239	4,518,149	7,390,662	15,870,255	214,267,616
2023	214,267,616	13,592,332	4,698,875	7,704,381	17,040,290	230,118,830
2024	230,118,830	14,392,501	4,886,830	8,031,759	18,277,691	246,922,609
2025	246,922,609	15,203,152	5,082,303	8,373,395	19,590,197	264,765,352
2026	264,765,352	16,035,065	5,285,595	8,729,909	20,984,158	283,729,949
2027	283,729,949	16,792,300	5,497,019	9,101,955	22,469,790	304,006,413
2028	304,006,413	17,547,954	5,716,900	9,162,921	24,033,700	325,371,980
2029	325,371,980	18,337,612	5,945,576	9,553,362	25,706,914	348,240,220
2030	348,240,220	19,162,805	6,183,399	3,289,849	26,980,235	365,530,898
2031	365,530,898	20,025,131	6,430,735	3,414,823	28,315,702	383,667,027
2032	383,667,027	20,926,262	6,687,964	3,544,796	29,716,341	402,689,866
2033	402,689,866	21,867,944	6,955,483	3,679,967	31,185,329	422,642,701
2034	422,642,701	22,852,001	7,233,702	3,820,546	32,725,998	443,570,946
2035	443,570,946	23,880,341	7,523,050	3,966,748	34,341,844	465,522,247
2036	465,522,247	24,954,956	7,823,972	4,118,798	36,036,534	488,546,595
2037	488,546,595	26,077,929	8,136,931	4,276,930	37,813,916	512,696,443
2038	512,696,443	27,251,436	8,462,408	4,441,387	39,678,025	538,026,827
2039	538,026,827	28,477,751	8,800,904	4,612,423	41,633,099	564,595,502
2040	564,595,502	29,759,250	9,152,940	4,790,300	43,683,582	592,463,074
2041	592,463,074	31,098,416	9,519,058	4,975,292	45,834,137	621,693,145
2042	621,693,145	32,497,845	9,899,820	5,167,684	48,089,659	652,352,463
2043	652,352,463	33,960,248	10,295,813	5,367,771	50,455,284	684,511,083

Dukes County Retirement System
Actuarial Valuation as of January 1, 2014

SECTION 4 - REQUIRED DISCLOSURES

The Governmental Accounting Standards Board (GASB) requires certain disclosures of pension liabilities for public employer financial statements in accordance with Statement Numbers 25 and 27. Footnote disclosures required by GASB Statement Numbers 25 and 27 include a description of the Plan, a summary of significant accounting policies and information about contributions, legally required reserves and investment concentrations. The Annual Required Contribution (ARC) shown is for the fiscal year beginning the following July 1.

Below is the required disclosure information:

<u>Valuation Date</u>	<u>1/1/2014</u>	<u>1/1/2011</u>
1. Actuarial Accrued Liability	\$141,568,416	\$110,358,557
2. Actuarial Value of Assets	97,171,632	73,989,143
3. Unfunded Actuarial Accrued Liability (UAAL)	\$44,396,784	\$36,369,414
4. Funded Ratio = 2. ÷ 1.	68.6%	67.0%
5. Covered Payroll	\$34,859,969	\$29,118,456
6. UAAL as a Percentage of Covered Payroll = 3. ÷ 5.	127.4%	124.9%
7. Annual Required Contribution (ARC)	\$5,601,553	\$4,882,720
8. Net Pension Obligation	\$0	\$0

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) / c)
1/1/2014	97,171,632	141,568,416	44,396,784	68.6%	34,859,969	127.4%
1/1/2011	73,989,143	110,358,557	36,369,414	67.0%	29,118,456	124.9%
1/1/2009	60,628,878	97,882,251	37,253,373	61.9%	30,407,294	122.5%
1/1/2007	53,493,298	82,756,819	29,263,521	64.6%	26,285,973	111.3%
1/1/2005	43,587,979	68,303,109	24,715,130	63.8%	22,710,276	108.8%
1/1/2003	36,978,826	63,042,045	26,063,219	58.7%	20,191,180	129.1%
1/1/2001	31,491,429	45,304,948	13,813,519	69.5%	18,408,970	75.0%
1/1/1998	21,621,530	36,447,821	14,826,291	59.3%	14,311,001	103.6%

Dukes County Retirement System
Actuarial Valuation as of January 1, 2014

SECTION 4 - REQUIRED DISCLOSURES

The most recent actuarial valuation of the System was prepared by KMS Actuaries, LLC as of January 1, 2014.

The normal cost for employees on that date was:	\$3,301,367	9.5% of payroll
The normal cost for the employer was:	\$1,668,116	4.8% of payroll

The actuarial liability for active members was:	\$83,234,388
The actuarial liability for retired and inactive members was:	58,334,028
Total actuarial liability:	\$141,568,416
System assets as of that date:	\$97,171,632
Unfunded actuarial accrued liability:	\$44,396,784

The ratio of System assets to total actuarial accrued liability was: 68.6%

The principal actuarial assumptions used in the valuation are as follows:

Investment Return:	7.75%
Rate of Salary Increase:	Based on service, 6% graded down to 4.25% for Group 1
	Based on service, 7% graded down to 4.75% for Group 4

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) / c)
1/1/2014	97,171,632	141,568,416	44,396,784	68.6%	34,859,969	127.4%
1/1/2011	73,989,143	110,358,557	36,369,414	67.0%	29,118,456	124.9%
1/1/2009	60,628,878	97,882,251	37,253,373	61.9%	30,407,294	122.5%
1/1/2007	53,493,298	82,756,819	29,263,521	64.6%	26,285,973	111.3%
1/1/2005	43,587,979	68,303,109	24,715,130	63.8%	22,710,276	108.8%
1/1/2003	36,978,826	63,042,045	26,063,219	58.7%	20,191,180	129.1%
1/1/2001	31,491,429	45,304,948	13,813,519	69.5%	18,408,970	75.0%
1/1/1998	21,621,530	36,447,821	14,826,291	59.3%	14,311,001	103.6%

SECTION 5 - SUMMARY OF PLAN PROVISIONS

Administration

There are 105 contributory retirement systems for public employees in Massachusetts. Each system is governed by a retirement board and all boards, although operating independently, are governed by Chapter 32 of the Massachusetts General Laws and other applicable statutes. This law in general provides uniform benefits, uniform contribution requirements and a uniform accounting and funds structure for all systems.

Participation

Participation is mandatory for all full-time employees. Eligibility with respect to part-time, provisional, temporary, seasonal or intermittent employment is governed by regulations promulgated by the local retirement board, and approved by PERAC. Membership is optional for certain elected officials.

There are four classes of membership in the Retirement System:

Group 1:	General employees, including clerical, administrative, technical and all other employees not otherwise classified.
Group 2:	Certain specified hazardous duty positions.
Group 3:	State police officers and inspectors.
Group 4:	Local police officers, firefighters and other specified hazardous positions.

For members in more than one group, participation will be proportional.

Member Contributions

Member contributions vary depending on the most recent date of membership:

Prior to 1975:	5% of Salary
1975 – 1983:	7% of Salary
1984 – June 30, 1996:	8% of Salary
July 1, 1996 – present:	9% of Salary
1979 – present:	An additional 2% of Salary in excess of \$30,000.
Group 1 members hired on or after April 2, 2012:	6% of Salary with 30 or more years of creditable service.

Rate of Interest

Interest on regular deductions made after January 1, 1984 is a rate established by PERAC in consultation with the Commissioner of Banks. The rate is obtained from the average rates paid on individual savings accounts by a representative sample of at least ten financial institutions.

SECTION 5 - SUMMARY OF PLAN PROVISIONS

Retirement Age	The mandatory retirement age for some Group 2 and Group 4 members is age 65. Most Group 2 and Group 4 members may remain in service after reaching age 65. Group 4 members who are employed in certain public safety positions are required to retire at age 65. There is no mandatory retirement age for members in Group 1.
Salary	Gross regular compensation. This does not include bonuses, overtime, severance pay, unused sick leave credit or other similar compensation.
Average Salary	<p>Membership before April 2, 2012: Average annual rate of regular compensation received during the three consecutive years that produce the highest average, or, if greater, during the last three years (whether or not consecutive) preceding retirement.</p> <p>Membership on or after April 2, 2012: Average annual rate of regular compensation received during the five consecutive years that produce the highest average, or, if greater, during the last five years (whether or not consecutive) preceding retirement.</p>
Creditable Service	The period during which a member contributes to the retirement system plus certain periods of military service and "purchased" service.
Benefit Rate	The benefit rate varies with the member's retirement age, Group, membership date and years of creditable service at retirement. Each year a member retires prior to the age at which the 2.5% maximum benefit rate applies, a reduction is applied to each year of age under the maximum age. The maximum age and reduction for each Group and membership date is as follows:

	<u>Group 1</u>	<u>Group 2</u>	<u>Group 4</u>
2.5% for Membership before April 2, 2012:			
Maximum age:	65	60	55
Reduction:	0.1%	0.1%	0.1%
2.5% for Membership on or after April 2, 2012 (less than 30 years of service):			
Maximum age:	67	62	57
Reduction:	0.15%	0.15%	0.15%
2.5% for Membership on or after April 2, 2012 (30+ years of service):			
Maximum age:	67	62	57
Reduction:	0.125%	0.125%	0.125%

Dukes County Retirement System
Actuarial Valuation as of January 1, 2014

SECTION 5 - SUMMARY OF PLAN PROVISIONS

Superannuation Retirement	Eligibility if membership before April 2, 2012:	<ul style="list-style-type: none"> • completion of 20 years of Creditable Service, or • attainment of age 55 if hired prior to 1978, or • attainment of age 55 with 10 years of Creditable Service, if hired after 1978.
	Eligibility if membership on or after April 2, 2012:	<ul style="list-style-type: none"> • attainment of age 60 with 10 years of Creditable Service if classified in Group 1 • attainment of age 55 with 10 years of Creditable Service if classified in Group 2 • attainment of age 55 if hired prior to 1978 or if classified in Group 4
	Benefit Amount	Product of the member's Benefit Rate, Average Salary and Creditable Service.
	Maximum Benefit	80% of the member's Average Salary.
	Veteran's Benefit	Additional benefit of \$15 per year of Creditable Service, up to a maximum of \$300.
Deferred Vested	Eligibility	<ul style="list-style-type: none"> • completion of ten or more years of Creditable Service. • elected officials hired prior to 1978, completion of six years of Creditable Service.
	Benefit Amount	Accrued benefit payable commencing at age 55, or the completion of 20 years of Creditable Service, or may be deferred until later at the participant's option.
Withdrawal of Contributions		<p>Contributions may be withdrawn upon termination of employment.</p> <ul style="list-style-type: none"> • Members who voluntarily terminate with at least ten years of creditable service will receive 100% of the regular interest that has accrued to the Annuity Savings Account. • Members who voluntarily terminate with fewer than ten years of creditable service will receive interest on the Annuity Savings Account at the annual rate of 3%.

SECTION 5 - SUMMARY OF PLAN PROVISIONS

Ordinary Disability Retirement	Eligibility	Non-job related disability after completion of ten years of Creditable Service.
	Benefit Amount for Group 1 membership before April 2, 2012 or Group 2 or Group 4	Superannuation benefit determined if the member is age 55, up to a maximum of 80% of Average Salary over three years. If the member is a veteran, 50% of final rate of salary (final year) plus an annuity based on the accumulated member contributions plus credited interest, up to a maximum of 80% of Average Salary over five years.
	Benefit Amount for Group 1 membership on or after April 2, 2012	Superannuation benefit determined if the member is age 60, up to a maximum of 80% of Average Salary over three years. If the member is a veteran, 50% of final rate of salary (final year) plus an annuity based on the accumulated member contributions plus credited interest, up to a maximum of 80% of Average Salary over five years.
Accidental Disability Retirement	Eligibility	Disabled as a result of an accident in the performance of duties. There is no minimum age or service requirement.
	Benefit Amount	72% of Salary plus an annuity based on accumulated member contributions plus credited interest.
	Maximum Benefit	100% of Salary if hired before January 1, 1988, otherwise 75% of Salary.
	Veteran's Benefit	Additional allowance of \$15 per year of Creditable Service, up to a maximum of \$300.
	Supplemental Dependent	Additional allowance of \$415 per year for each child.
Non-Occupational Death	Eligibility	For members with at least two years of creditable service who die while in active service, but not due to occupational injury.
	Benefit Amount	Benefit as if Option C had been elected. Minimum benefit of \$250 per month for surviving spouse, \$120 per month for first child and \$90 per month for each additional child.

SECTION 5 - SUMMARY OF PLAN PROVISIONS

Accidental Death	Eligibility	For members who die as a result of an occupational injury.
	Benefit Amount	72% of Salary plus an annuity based on accumulated member contributions plus credited interest.
	Maximum Benefit	100% of Salary if hired before January 1, 1988, otherwise 75% of Salary.
	Veteran's Benefit	Additional allowance of \$15 per year of creditable service, up to a maximum of \$300.
	Supplemental Dependent Allowance	Additional allowance of \$708.60 per year for each child until age 18 (or age 22 if a full-time student).
Cost-of-Living Adjustment (COLA)	In accordance with the adoption of Chapter 17 of the Acts of 1997, the granting of a Cost-of-Living Adjustment will be determined by an annual vote by the Retirement Board. The amount of increase will be based upon the Consumer Price Index, limited to a maximum of 3.0%, beginning on July 1. All retirees, disabled retirees and beneficiaries who have been receiving benefit payments for at least one year as of July 1 are eligible for the adjustment. The maximum amount of pension benefit subject to a COLA is \$13,000, effective July 1, 2012, and \$14,000, effective July 1, 2013. All COLAs granted to members after 1981 and prior to July 1, 1998 are deemed to be an obligation of the Commonwealth of Massachusetts and are not the liability of the Retirement System.	
Optional Forms of Payment	A member may elect to receive his or her retirement allowance in one of three forms of payment: <ul style="list-style-type: none">• Option A – Life annuity.• Option B – Life annuity with death benefit equal to excess of member contributions plus credited interest to retirement over annuity benefit paid to member.• Option C – A reduced annual allowance commencing at retirement with 66⅔% of benefit continued to designated beneficiary upon death of member. For members who retired on or after January 12, 1988, if the beneficiary pre-deceases the retiree, the benefit payable increases based on the factor used to determine the Option C benefit at retirement. For members who retired prior to January 12, 1988, if the System has accepted Section 288 of Chapter 194 of the Acts of 1998 and the beneficiary pre-deceases the retiree, the benefit payable increases based on the factor used to determine the Option C benefit at retirement.	

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Valuation Date: January 1, 2014

Investment Return: 7.75% per year. Previously, 8% per year.

Annuity Savings Fund Interest Rate: 2.00% per year

Amortization Method: *Unfunded Actuarial Accrued Liability (UAL):*
Increasing dollar amount at 4.5% to reduce the Unfunded Actuarial Accrued Liability to zero on or before June 30, 2030.

Early Retirement Incentive Programs (ERI):
Increasing dollar amount at 4.5% to reduce the Unfunded Actuarial Accrued Liability attributable to the ERIs to zero on or before June 30, 2028.

Payroll Growth: 4%. Previously, 5%.

Salary Scale: The assumed annual rates for salary increases including longevity are illustrated by the following rates:

<u>Years of Service</u>	<u>General Employees</u>	<u>Police and Fire</u>
0	6.00%	7.00%
1	5.50%	6.50%
2	5.50%	6.00%
3	5.25%	5.75%
4	5.25%	5.25%
5	4.75%	5.25%
6	4.75%	4.75%
7	4.50%	4.75%
8	4.50%	4.75%
9	4.25%	4.75%

Cost-of-Living Allowance: Cost-of-Living Allowances (COLA) are assumed to be 3% of the pension amount, capped at \$420 per year. Previously, 3% of the pension amount, capped at \$360 per year.

Mortality Table: *Pre-Retirement:* RP-2000 Mortality Table Projected to 2020 with Scale AA.
Post-Retirement: RP-2000 Mortality Table Projected to 2015 with Scale AA. For disabled lives, set forward two years.
Previously, RP-2000 Healthy Annuitant Table, no projection.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Turnover Rates:

Illustrative turnover rates are shown below:

<u>Creditable Service</u>	<u>General Employees</u>	<u>Police and Fire</u>
0	0.1500	0.0150
10	0.0540	0.0150
20	0.0200	0.0000
30	0.0000	0.0000

Disability Rates:

Illustrative disability rates are shown below:

<u>Attained Age</u>	<u>General Employees</u>	<u>Police and Fire</u>
25	0.02%	0.20%
30	0.03%	0.30%
35	0.06%	0.30%
40	0.10%	0.30%
45	0.15%	1.00%
50	0.19%	1.25%
55	0.24%	1.20%
60	0.28%	0.85%
62	0.30%	0.75%
65	0.30%	0.00%

General Employees: 55% of disabilities are accidental and 45% are ordinary.

Police and Fire: 90% of disabilities are accidental and 10% are ordinary.

Retirement Rates:

Illustrative retirement rates are shown below:

<u>Age</u>	<u>General Employees</u>		<u>Police and Fire</u>
	<u>Male</u>	<u>Female</u>	<u>Male & Female</u>
45	0.0%	0.0%	1.0%
50	1.0%	1.5%	2.0%
55	2.0%	5.5%	15.0%
60	12.0%	5.0%	20.0%
62	30.0%	15.0%	25.0%
65	40.0%	15.0%	100.0%
69	30.0%	20.0%	
70	100.0%	100.0%	

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Cost Method:	Individual Entry Age Normal.
Actuarial Asset Method:	<p>The Actuarial Value of Assets is the market value of assets as of the valuation date reduced by the sum of:</p> <ul style="list-style-type: none">a) 80% of gains and losses of the prior year,b) 60% of gains and losses of the second prior year,c) 40% of gains and losses of the third prior year andd) 20% of gains and losses of the fourth prior year. <p>Investment gains and losses are determined by the excess or deficiency of the expected return over the actual return on the market value. The actuarial valuation of assets is further constrained to be not less than 80% or more than 120% of market value.</p>
Census Data:	Census data as of the valuation date were submitted by the Retirement Board.
Asset Data:	Asset information is reported annually to the Public Employee Retirement Administration Commission by the Dukes County Retirement System.
Dependents:	80% of all members will be survived by a spouse. Age assumption for spouses is that males are assumed to be three years older than females.
Administrative Expenses:	The anticipated administrative expenses for the fiscal year. For Fiscal Year 2015, the administrative expenses were assumed to be \$305,000 and are anticipated to increase at 4% per year.

SECTION 7 - PLAN MEMBER INFORMATION

Exhibit 7.1 - Active Members by Age and Years of Service as of January 1, 2014

Age	Years of Service									Total
	<u>0 to 4</u>	<u>5 to 9</u>	<u>10 to 14</u>	<u>15 to 19</u>	<u>20 to 24</u>	<u>25 to 29</u>	<u>30 to 34</u>	<u>35 to 39</u>	<u>40 & up</u>	
Under 20	-	-	-	-	-	-	-	-	-	0
	-	-	-	-	-	-	-	-	-	0
20-24	13	-	-	-	-	-	-	-	-	13
	31,283	-	-	-	-	-	-	-	-	31,283
25 to 29	34	7	-	-	-	-	-	-	-	41
	45,355	50,078	-	-	-	-	-	-	-	46,162
30 to 34	28	10	5	-	-	-	-	-	-	43
	44,530	64,404	66,089	-	-	-	-	-	-	51,659
35 to 39	22	15	5	2	-	-	-	-	-	44
	40,057	60,931	96,431	96,884	-	-	-	-	-	56,162
40 to 44	26	21	17	11	2	-	-	-	-	77
	41,431	55,744	57,776	94,954	90,370	-	-	-	-	57,861
45 to 49	29	24	15	8	7	8	1	-	-	92
	39,359	50,316	64,688	54,960	78,236	109,935	174,887	-	-	58,272
50 to 54	18	21	21	13	14	15	-	-	-	102
	42,368	50,686	46,258	57,414	73,638	88,436	-	-	-	57,866
55 to 59	17	18	28	16	11	8	4	2	-	104
	43,772	48,286	57,892	65,765	48,311	76,491	88,913	101,685	-	57,585
60 to 64	7	12	16	5	11	8	4	-	2	65
	28,901	49,079	47,165	42,080	70,796	65,750	97,014	-	60,731	54,932
65 to 69	2	7	8	7	4	5	2	2	-	37
	37,507	51,737	53,509	58,949	47,353	81,360	32,558	56,757	-	55,479
70 & up	-	2	2	2	-	2	2	-	1	11
	-	24,455	39,252	51,827	-	63,783	86,283	-	6,256	48,860
Total	196	137	117	64	49	46	13	4	3	629
Average Salary	41,222	52,703	56,570	65,676	66,508	84,311	88,944	79,221	42,573	55,421
Average Age:							49.0	Average Service:		11.1

Dukes County Retirement System
Actuarial Valuation as of January 1, 2014

SECTION 7 - PLAN MEMBER INFORMATION

Exhibit 7.2 - Retired Plan Members and Beneficiaries Annual Pensions as of January 1, 2014

Attained Age	Male		Female		Total	
	Count	Total Payments	Count	Total Payments	Count	Total Payments
<20	0	0	0	0	0	0
20-24	1	3,420	0	0	1	3,420
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	0	0	0	0	0	0
40-44	0	0	0	0	0	0
45-49	0	0	1	25,199	1	25,199
50-54	2	69,017	1	21,953	3	90,971
55-59	13	437,842	9	126,912	22	564,754
60-64	11	246,638	19	378,969	30	625,608
65-69	26	546,918	40	744,544	66	1,291,462
70-74	21	566,106	26	587,066	47	1,153,172
75-79	12	177,465	20	334,118	32	511,582
80-84	3	56,187	11	160,233	14	216,419
85-89	1	16,185	13	139,081	14	155,266
90-94	2	9,344	4	48,442	6	57,787
95+	0	0	2	20,267	2	20,267
Total	92	2,129,122	146	2,586,784	238	4,715,906
Average Age	68.1		72.3		70.7	
Average Payment		23,143		17,718		19,815
	38.7%	45.1%	61.3%	54.9%	100.0%	100.0%

Included in above totals is \$29,220 in State reimbursed COLAs.

SECTION 7 - PLAN MEMBER INFORMATION

Exhibit 7.3 - Disabled Plan Members Annual Pensions as of January 1, 2014

Attained Age	Male		Female		Total	
	Count	Total Payments	Count	Total Payments	Count	Total Payments
<20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	1	33,866	0	0	1	33,866
40-44	0	0	0	0	0	0
45-49	0	0	0	0	0	0
50-54	4	162,949	1	18,974	5	181,923
55-59	5	261,088	0	0	5	261,088
60-64	5	212,390	1	39,009	6	251,399
65-69	1	23,077	1	25,365	2	48,443
70-74	2	40,136	0	0	2	40,136
75-79	1	7,698	0	0	1	7,698
80-84	1	28,070	0	0	1	28,070
85-89	0	0	0	0	0	0
90-94	0	0	0	0	0	0
95+	0	0	0	0	0	0
Total	20	769,274	3	83,349	23	852,623
Average Age	60.9		61.3		61.0	
Average Payment		38,464		27,783		37,071
	87.0%	90.2%	13.0%	9.8%	100.0%	100.0%

Included in above totals is \$1,755 in State reimbursed COLAs.

SECTION 8 - GLOSSARY OF TERMS

Actuarial Accrued Liability – That portion of the Actuarial Present Value of pension plan benefits which is not provided by future Normal Costs or employee contributions. It is the portion of the Actuarial Present Value attributable to service rendered as of the Valuation Date.

Actuarial Assumptions – Assumptions, based upon past experience or standard tables, used to predict the occurrence of future events affecting the commencement, amount and duration of pension benefits, such as: changes in compensation, mortality, withdrawal, disablement and retirement; rates of investment earnings and asset appreciation or depreciation; and any other relevant items.

Actuarial Cost Method (or Funding Method) – A procedure for allocating the Actuarial Present Value of all past and future pension plan benefits to the current year (Normal Cost) and the past (Actuarial Accrued Liability).

Actuarial Gain or Loss (or Experience Gain or Loss) – A measure of the difference between actual experience and that expected based upon the set of Actuarial Assumptions, during the period between the valuation date and the most recent immediately preceding valuation date.

Actuarial Present Value – The dollar value on the valuation date of all benefits expected to be paid to current members based upon the Actuarial Assumptions and the terms of the Plan.

Amortization Payment – That portion of the pension plan appropriation which represents payments made to pay interest on and the reduction of the Unfunded Accrued Liability.

Annual Required Contribution (ARC) – The employer's periodic required contributions to a defined benefit pension plan, calculated in accordance with the rules required by the Governmental Accounting Standards Board (GASB).

Annual Statement – The statement submitted by the local retirement board to PERAC each year that describes the asset holdings and Fund balances as of December 31 and the transactions during the calendar year that affected the financial condition of the retirement system.

Annuity Reserve Fund – The fund into which total accumulated Member Contributions, including interest, is transferred at the time a member retires, and from which annuity payments are made.

Annuity Savings Fund – The fund in which Member Contributions plus interest credited are held for active members and for former members who have not withdrawn their contributions and are not yet receiving a benefit (inactive members).

SECTION 8 - GLOSSARY OF TERMS

Assets – The total value of the investments held by the Plan trust that are for the payment of promised benefits.

Cost of Benefits – The estimated payment from the pension system for benefits for the fiscal year.

Expense Fund – The fund into which the appropriation for administrative expenses is paid and from which all such expenses are paid.

Funded Ratio – The Actuarial Value of Assets expressed as a percentage of the Actuarial Accrued Liability.

Funding Schedule – The schedule based upon the most recently approved actuarial valuation which sets forth the amount which would be appropriated to the pension system in accordance with Section 22D of M.G.L. Chapter 32.

GASB – Governmental Accounting Standards Board.

Normal Cost – Total Normal Cost is that portion of the Actuarial Present Value of pension plan benefits which is expected to accrue in the current fiscal year. The Employee Normal Cost is the amount of the expected Member Contributions for the current fiscal year. The Employer Normal Cost is the difference between the Total Normal Cost and the Employee Normal Cost.

Pension Benefit Obligation – The portion of the Actuarial Present Value attributable to past service in accordance with the Projected Unit Credit cost method as stipulated by GASB Statement Number 5 (GASB 5). GASB 5 has been superseded by GASB Statements Number 25 and 27.

Pension Fund – The fund into which appropriation amounts as determined by PERAC are paid and from which pension benefits are paid.

Pension Reserve Fund – The fund which shall be credited with all amounts set aside by a system for the purpose of establishing a reserve to meet future pension liabilities. These amounts would include excess interest earnings.

Present Value of Future Benefits – The actuarial present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value of money and the probabilities of payment.

Special Fund for Military Service Credit – The fund which is credited with amounts paid by the retirement board equal to the amount which would have been contributed by a member during a military leave of absence as if the member had remained in active service of the retirement board. In the event of retirement or a non-job related death, such amount is transferred to the Annuity Reserve Fund. In the event of termination prior to retirement or death, such amount shall be transferred to the Pension Fund.

Unfunded Actuarial Accrued Liability – The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

SECTION 9 - MEMBER UNIT FY2016 APPROPRIATION

Unit Name	FY2016 Appropriation										Increase over FY2015	Payment on 7/1/2015
	Actuarial Allocation Method						Salary Allocation Method		Phase-In			
	Normal Cost	Amortization of UAL	2002 ERI	2003 ERI	Net 3(8)(c) Transfers	Total Appropriation	Valuation Salary	Total Appropriation	Total Appropriation	FY2015 Appropriation		
Up-Island School	58,027	107,624	2,436	-	4,486	172,573	1,363,265	228,758	210,032	158,956		206,185
Dukes County	136,952	292,775	21,271	3,842	21,705	476,545	2,051,764	344,289	388,370	313,649		381,256
Tisbury	345,038	656,325	37,279	-	27,410	1,066,052	5,999,301	1,006,690	1,026,475	1,015,376		1,007,673
Edgartown	399,750	898,752	27,035	17,614	40,077	1,383,228	7,794,666	1,307,953	1,333,043	1,260,489		1,308,626
Oak Bluffs	303,596	654,750	18,018	7,645	38,289	1,022,298	6,142,808	1,030,771	1,027,947	997,263		1,009,118
West Tisbury	151,623	259,694	9,881	4,788	11,510	437,496	2,143,410	359,667	385,607	341,840		378,544
Chilmark	115,602	183,925	12,486	6,611	7,556	326,180	2,009,143	337,137	333,485	300,966		327,377
Aquinnah	60,563	79,641	-	-	3,389	143,593	824,354	138,328	140,083	131,474		137,517
Gosnold	10,569	17,044	-	-	1,002	28,615	123,522	20,727	23,356	24,552		22,928
MV Transit Authority	8,396	23,621	-	-	-	32,017	519,102	87,106	68,745	81,018		67,486
MV Regional School	172,384	276,377	16,757	-	14,489	480,007	3,603,470	604,667	563,118	562,657		552,803
MV Landbank	4,435	47,727	-	4,844	609	57,615	637,138	106,913	90,482	105,995		88,825
MV Refuse	21,684	43,471	-	-	1,150	66,305	521,030	87,429	80,388	92,568		78,915
MV Commission	36,120	75,116	-	4,771	3,288	119,295	753,680	126,468	124,077	133,659		121,804
OB Water Dept	9,673	28,014	-	-	40	37,727	373,316	62,643	54,338	81,091		53,343
	1,834,412	3,644,856	145,163	50,115	175,000	5,849,546	34,859,969	5,849,546	5,849,546	5,601,553	4.43%	5,742,400

Dukes County Retirement System
Actuarial Valuation as of January 1, 2014

SECTION 10 - RESULTS BY MEMBER UNIT

Member Unit		Up-Island School	Dukes County	Tisbury	Edgartown	Oak Bluffs	West Tisbury
Summary of Member Data							
Groups 1 & 2	Active Members	39	22	97	114	92	24
	Average Age	47.6	51.3	50.3	50.9	49.4	55.2
	Average Service	8.6	12.3	11.6	11.9	9.1	12.8
	Salary	1,363,265	1,477,594	4,825,816	5,649,566	4,544,574	1,381,586
	Average Salary	34,956	67,163	49,751	49,558	49,398	57,566
Group 4	Active Members	0	9	14	20	17	9
	Average Age	0.0	41.7	46.9	43.1	38.2	44.9
	Average Service	0.0	7.6	16.4	16.7	10.8	17.6
	Salary	0	574,170	1,173,485	2,145,100	1,598,234	761,824
	Average Salary	0	63,797	83,820	107,255	94,014	84,647
	Retired Members and Survivors	9	25	48	44	43	15
	Annual Pensions	142,729	552,361	806,858	1,001,617	917,309	366,250
	Average Age	68.6	70.8	70.8	70.5	71.7	70.5
	Average Pension	15,859	22,094	16,810	22,764	21,333	24,417
	Disabled Members	0	5	2	6	8	0
	Annual Pensions	0	138,306	65,321	273,663	301,084	0
	Average Age	0.0	64.5	59.3	58.7	60.0	0.0
	Average Pension	0	27,661	32,660	45,610	37,635	0
	Inactive Members	16	11	19	17	29	4
	Annuity Savings Fund	129,568	109,473	288,660	196,039	228,304	82,964

SECTION 10 - RESULTS BY MEMBER UNIT

Member Unit	Up-Island School	Dukes County	Tisbury	Edgartown	Oak Bluffs	West Tisbury
Actuarial Accrued Liability - January 1, 2014						
Active Employees	2,445,598	4,321,765	16,711,080	21,335,716	11,990,634	6,281,724
Retired Members and Survivors	1,487,721	5,530,228	7,810,610	9,730,790	9,381,368	3,634,836
Disabled Members	0	1,442,845	761,324	3,301,399	3,516,781	0
Inactive Members	129,568	109,473	288,660	196,039	228,304	82,964
Total	4,062,887	11,404,311	25,571,674	34,563,944	25,117,087	9,999,524
Actuarial Value of Plan Assets - January 1, 2014						
Actuarial Value of Assets	2,788,739	7,827,844	17,552,229	23,724,464	17,240,204	6,863,608
Unfunded Actuarial Accrued Liability						
Unfunded Actuarial Accrued Liability	1,248,659	3,313,733	7,629,419	10,372,351	7,608,390	2,982,446
ERI 2002	25,489	222,541	390,026	282,851	188,506	103,375
ERI 2003	0	40,193	0	184,278	79,987	50,095
Total	1,274,148	3,576,467	8,019,445	10,839,480	7,876,883	3,135,916
Normal Cost - January 1, 2014						
Total Normal Cost	168,067	308,411	812,630	1,027,717	806,201	322,277
Administrative Expenses	10,990	20,166	53,136	67,200	52,716	21,073
Total Normal Cost	179,057	328,577	865,766	1,094,917	858,917	343,350
Employee Normal Cost	(126,291)	(204,040)	(552,007)	(731,406)	(582,843)	(205,472)
Employer Normal Cost	52,766	124,537	313,759	363,511	276,074	137,878
Employer Normal Cost as % of Salary	3.87%	6.07%	5.23%	4.66%	4.49%	6.43%

SECTION 10 - RESULTS BY MEMBER UNIT

Member Unit	Up-Island School	Dukes County	Tisbury	Edgartown	Oak Bluffs	West Tisbury
2015 Appropriation						
Appropriation %	2.8935%	5.3447%	18.0929%	22.4897%	17.9668%	6.0532%
Non-ERI Appropriation	156,588	289,240	979,141	1,217,091	972,319	327,582
ERI 2002	2,368	20,675	36,235	26,278	17,513	9,604
ERI 2003	0	3,734	0	17,120	7,431	4,654
Total Appropriation	158,956	313,649	1,015,376	1,260,489	997,263	341,840
2016 Appropriation						
Actuarial Allocation Method:						
Employer Normal Cost	58,027	136,952	345,038	399,750	303,596	151,623
Amortization Payment of UAL	107,624	292,775	656,325	898,752	654,750	259,694
ERI 2002	2,436	21,271	37,279	27,035	18,018	9,881
ERI 2003	0	3,842	0	17,614	7,645	4,788
Net 3(8)(c) Transfers	4,486	21,705	27,410	40,077	38,289	11,510
Total Appropriation	172,573	476,545	1,066,052	1,383,228	1,022,298	437,496
Salary Allocation Method:						
Salary	1,363,265	2,051,764	5,999,301	7,794,666	6,142,808	2,143,410
Appropriation %	3.9107%	5.8857%	17.2097%	22.3599%	17.6214%	6.1486%
Total Appropriation	228,758	344,289	1,006,690	1,307,953	1,030,771	359,667
Phase-In (1/3 Actuarial + 2/3 Salary):	210,032	388,370	1,026,475	1,333,043	1,027,947	385,607
Actuarial Method as Percent of Salary Method:	75.44%	138.41%	105.90%	105.76%	99.18%	121.64%
Phase-In Method as Percent of Salary Method:	91.81%	112.80%	101.97%	101.92%	99.73%	107.21%
2016 Appropriation (Phase-In Method) Increase over 2015	32.13%	23.82%	1.09%	5.76%	3.08%	12.80%
2016 Appropriation (Salary Method) Increase over 2015	43.91%	9.77%	-0.86%	3.77%	3.36%	5.22%

SECTION 10 - RESULTS BY MEMBER UNIT

Member Unit	Up-Island School	Dukes County	Tisbury	Edgartown	Oak Bluffs	West Tisbury
2017 Appropriation						
Actuarial Allocation Method:						
Employer Normal Cost	60,348	142,430	358,839	415,740	315,739	157,688
Amortization Payment of UAL	112,467	305,950	685,860	939,195	684,213	271,380
ERI 2002	2,546	22,228	38,957	28,252	18,829	10,325
ERI 2003	0	4,015	0	18,406	7,989	5,004
Net 3(8)(c) Transfers	5,096	13,689	31,138	43,084	31,379	12,377
Total Appropriation	180,457	488,312	1,114,794	1,444,677	1,058,149	456,774
Salary Allocation Method:						
Salary	1,363,265	2,051,764	5,999,301	7,794,666	6,142,808	2,143,410
Appropriation %	3.9107%	5.8857%	17.2097%	22.3599%	17.6214%	6.1486%
Total Appropriation	238,385	358,778	1,049,057	1,363,002	1,074,151	374,804
Phase-In (2/3 Actuarial + 1/3 Salary):	199,764	445,138	1,092,884	1,417,456	1,063,482	429,453
Actuarial Method as Percent of Salary Method:	75.70%	136.10%	106.27%	105.99%	98.51%	121.87%
Phase-In Method as Percent of Salary Method:	83.80%	124.07%	104.18%	104.00%	99.01%	114.58%
2017 Appropriation (Phase-In Method) Increase over 2016	-4.89%	14.62%	6.47%	6.33%	3.46%	11.37%
2017 Appropriation (Salary Method) Increase over 2016	4.21%	4.21%	4.21%	4.21%	4.21%	4.21%

SECTION 10 - RESULTS BY MEMBER UNIT

Member Unit		Chilmark	Aquinnah	Gosnold	MV Transit Authority	MV Regional School
Summary of Member Data						
Groups 1 & 2	Active Members	30	10	5	7	76
	Average Age	51.3	47.6	55.5	42.8	47.4
	Average Service	9.5	8.4	12.6	10.4	8.0
	Salary	1,570,919	482,381	123,522	519,102	3,603,470
	Average Salary	52,364	48,238	24,704	74,157	47,414
Group 4	Active Members	6	4	0	0	0
	Average Age	44.7	43.8	0.0	0.0	0.0
	Average Service	14.6	14.8	0.0	0.0	0.0
	Salary	438,224	341,973	0	0	0
	Average Salary	73,037	85,493	0	0	0
Retired Members and Survivors	Active Members	14	4	4	0	24
	Annual Pensions	240,421	58,952	31,873	0	435,675
	Average Age	67.1	69.2	71.1	0.0	72.0
	Average Pension	17,173	14,738	7,968	0	18,153
Disabled Members	Active Members	0	1	0	0	1
	Annual Pensions	0	48,884	0	0	25,365
	Average Age	0.0	60.9	0.0	0.0	68.5
	Average Pension	0	48,884	0	0	25,365
Inactive Members	Active Members	6	0	0	5	17
	Annuity Savings Fund	62,122	0	0	79,200	147,453

SECTION 10 - RESULTS BY MEMBER UNIT

Member Unit	Chilmark	Aquinnah	Gosnold	MV Transit Authority	MV Regional School
Actuarial Accrued Liability - January 1, 2014					
Active Employees	4,685,199	1,859,363	306,515	885,012	6,464,008
Retired Members and Survivors	2,722,845	571,988	323,573	0	4,190,667
Disabled Members	0	545,238	0	0	260,981
Inactive Members	62,122	0	0	79,200	147,453
Total	7,470,166	2,976,589	630,088	964,212	11,063,109
Actuarial Value of Plan Assets - January 1, 2014					
Actuarial Value of Assets	5,127,473	2,043,111	432,488	661,829	7,593,645
Unfunded Actuarial Accrued Liability					
Unfunded Actuarial Accrued Liability	2,142,895	933,478	197,600	302,383	3,294,154
ERI 2002	130,629	0	0	0	175,310
ERI 2003	69,169	0	0	0	0
Total	2,342,693	933,478	197,600	302,383	3,469,464
Normal Cost - January 1, 2014					
Total Normal Cost	274,960	127,071	19,775	56,821	471,370
Administrative Expenses	17,979	8,309	1,293	3,715	30,822
Total Normal Cost	292,939	135,380	21,068	60,536	502,192
Employee Normal Cost	(187,817)	(80,308)	(11,457)	(52,901)	(345,436)
Employer Normal Cost	105,122	55,073	9,611	7,635	156,757
Employer Normal Cost as % of Salary	5.23%	6.68%	7.78%	1.47%	4.35%

SECTION 10 - RESULTS BY MEMBER UNIT

Member Unit	Chilmark	Aquinnah	Gosnold	MV Transit Authority	MV Regional School
2015 Appropriation					
Appropriation %	5.2184%	2.4294%	0.4537%	1.4971%	10.0960%
Non-ERI Appropriation	282,404	131,474	24,552	81,018	546,370
ERI 2002	12,136	0	0	0	16,287
ERI 2003	6,426	0	0	0	0
Total Appropriation	300,966	131,474	24,552	81,018	562,657
2016 Appropriation					
Actuarial Allocation Method:					
Employer Normal Cost	115,602	60,563	10,569	8,396	172,384
Amortization Payment of UAL	183,925	79,641	17,044	23,621	276,377
ERI 2002	12,486	0	0	0	16,757
ERI 2003	6,611	0	0	0	0
Net 3(8)(c) Transfers	7,556	3,389	1,002	0	14,489
Total Appropriation	326,180	143,593	28,615	32,017	480,007
Salary Allocation Method:					
Salary	2,009,143	824,354	123,522	519,102	3,603,470
Appropriation %	5.7635%	2.3648%	0.3543%	1.4891%	10.3370%
Total Appropriation	337,137	138,328	20,727	87,106	604,667
Phase-In (1/3 Actuarial + 2/3 Salary):	333,485	140,083	23,356	68,745	563,118
Actuarial Method as Percent of Salary Method:	96.75%	103.81%	138.06%	36.76%	79.38%
Phase-In Method as Percent of Salary Method:	98.92%	101.27%	112.68%	78.92%	93.13%
2016 Appropriation (Phase-In Method) Increase over 2015	10.80%	6.55%	-4.87%	-15.15%	0.08%
2016 Appropriation (Salary Method) Increase over 2015	12.02%	5.21%	-15.58%	7.51%	7.47%

SECTION 10 - RESULTS BY MEMBER UNIT

Member Unit	Chilmark	Aquinnah	Gosnold	MV Transit Authority	MV Regional School
2017 Appropriation					
Actuarial Allocation Method:					
Employer Normal Cost	120,226	62,985	10,992	8,732	179,279
Amortization Payment of UAL	192,202	83,225	17,811	24,683	288,814
ERI 2002	13,048	0	0	0	17,511
ERI 2003	6,909	0	0	0	0
Net 3(8)(c) Transfers	9,028	3,810	806	1,234	13,445
Total Appropriation	341,413	150,020	29,609	34,649	499,049
Salary Allocation Method:					
Salary	2,009,143	824,354	123,522	519,102	3,603,470
Appropriation %	5.7635%	2.3648%	0.3543%	1.4891%	10.3370%
Total Appropriation	351,325	144,149	21,599	90,772	630,114
Phase-In (2/3 Actuarial + 1/3 Salary):	344,717	148,063	26,939	53,355	542,733
Actuarial Method as Percent of Salary Method:	97.18%	104.07%	137.09%	38.17%	79.20%
Phase-In Method as Percent of Salary Method:	98.12%	102.72%	124.72%	58.78%	86.13%
2017 Appropriation (Phase-In Method) Increase over 2016	3.37%	5.70%	15.34%	-22.39%	-3.62%
2017 Appropriation (Salary Method) Increase over 2016	4.21%	4.21%	4.21%	4.21%	4.21%

SECTION 10 - RESULTS BY MEMBER UNIT

Member Unit		MV Landbank	MV Refuse	MV Commission	OB Water Dept	Total
Summary of Member Data						
Groups 1 & 2	Active Members	8	8	10	8	550
	Average Age	47.6	49.8	54.6	47.9	49.9
	Average Service	15.6	12.9	12.6	15.9	10.6
	Salary	637,138	521,030	753,680	373,316	27,826,959
	Average Salary	79,642	65,129	75,368	46,665	50,594
Group 4	Active Members	0	0	0	0	79
	Average Age	0.0	0.0	0.0	0.0	42.9
	Average Service	0.0	0.0	0.0	0.0	14.2
	Salary	0	0	0	0	7,033,010
	Average Salary	0	0	0	0	89,025
Retired Members and Survivors	Retired Members and Survivors	1	2	4	1	238
	Annual Pensions	19,366	36,584	104,638	1,272	4,715,906
	Average Age	75.3	67.5	69.2	78.2	70.7
	Average Pension	19,366	18,292	26,159	1,272	19,815
Disabled Members	Disabled Members	0	0	0	0	23
	Annual Pensions	0	0	0	0	852,623
	Average Age	0.0	0.0	0.0	0.0	61.0
	Average Pension	0	0	0	0	37,071
Inactive Members	Inactive Members	0	1	0	1	126
	Annuity Savings Fund	0	1,289	0	878	1,325,950

SECTION 10 - RESULTS BY MEMBER UNIT

Member Unit	MV Landbank	MV Refuse	MV Commission	OB Water Dept	Total
Actuarial Accrued Liability - January 1, 2014					
Active Employees	1,820,107	1,287,414	1,735,470	1,104,783	83,234,388
Retired Members and Survivors	168,851	376,308	1,240,875	8,850	47,179,510
Disabled Members	0	0	0	0	9,828,568
Inactive Members	0	1,289	0	878	1,325,950
Total	1,988,958	1,665,011	2,976,345	1,114,511	141,568,416
Actuarial Value of Plan Assets - January 1, 2014					
Actuarial Value of Assets	1,365,208	1,142,853	2,042,944	764,993	97,171,632
Unfunded Actuarial Accrued Liability					
Unfunded Actuarial Accrued Liability	573,073	522,158	883,489	349,518	42,353,746
ERI 2002	0	0	0	0	1,518,727
ERI 2003	50,677	0	49,912	0	524,311
Total	623,750	522,158	933,401	349,518	44,396,784
Normal Cost - January 1, 2014					
Total Normal Cost	62,002	65,732	102,321	39,128	4,664,483
Administrative Expenses	4,054	4,298	6,691	2,558	305,000
Total Normal Cost	66,056	70,030	109,012	41,686	4,969,483
Employee Normal Cost	(62,023)	(50,312)	(76,166)	(32,889)	(3,301,367)
Employer Normal Cost	4,033	19,718	32,846	8,797	1,668,116
Employer Normal Cost as % of Salary	0.63%	3.78%	4.36%	2.36%	4.79%

SECTION 10 - RESULTS BY MEMBER UNIT

Member Unit	MV Landbank	MV Refuse	MV Commission	OB Water Dept	Total
2015 Appropriation					
Appropriation %	1.8716%	1.7105%	2.3841%	1.4984%	100.0000%
Non-ERI Appropriation	101,287	92,568	129,022	81,091	5,411,747
ERI 2002	0	0	0	0	141,096
ERI 2003	4,708	0	4,637	0	48,710
Total Appropriation	105,995	92,568	133,659	81,091	5,601,553
2016 Appropriation					
Actuarial Allocation Method:					
Employer Normal Cost	4,435	21,684	36,120	9,673	1,834,412
Amortization Payment of UAL	47,727	43,471	75,116	28,014	3,644,856
ERI 2002	0	0	0	0	145,163
ERI 2003	4,844	0	4,771	0	50,115
Net 3(8)(c) Transfers	609	1,150	3,288	40	175,000
Total Appropriation	57,615	66,305	119,295	37,727	5,849,546
Salary Allocation Method:					
Salary	637,138	521,030	753,680	373,316	34,859,969
Appropriation %	1.8277%	1.4946%	2.1620%	1.0709%	100.0000%
Total Appropriation	106,913	87,429	126,468	62,643	5,849,546
Phase-In (1/3 Actuarial + 2/3 Salary):	90,482	80,388	124,077	54,338	5,849,546
Actuarial Method as Percent of Salary Method:	53.89%	75.84%	94.33%	60.23%	100.00%
Phase-In Method as Percent of Salary Method:	84.63%	91.95%	98.11%	86.74%	100.00%
2016 Appropriation (Phase-In Method) Increase over 2015	-14.64%	-13.16%	-7.17%	-32.99%	4.43%
2016 Appropriation (Salary Method) Increase over 2015	0.87%	-5.55%	-5.38%	-22.75%	4.43%

SECTION 10 - RESULTS BY MEMBER UNIT

Member Unit	MV Landbank	MV Refuse	MV Commission	OB Water Dept	Total
2017 Appropriation					
Actuarial Allocation Method:					
Employer Normal Cost	4,612	22,552	37,565	10,060	1,907,787
Amortization Payment of UAL	49,875	45,427	78,497	29,275	3,808,874
ERI 2002	0	0	0	0	151,696
ERI 2003	5,062	0	4,985	0	52,370
Net 3(8)(c) Transfers	2,546	2,131	3,810	1,427	175,000
Total Appropriation	62,095	70,110	124,857	40,762	6,095,727
Salary Allocation Method:					
Salary	637,138	521,030	753,680	373,316	34,859,969
Appropriation %	1.8277%	1.4946%	2.1620%	1.0709%	100.0000%
Total Appropriation	111,412	91,109	131,791	65,279	6,095,727
Phase-In (2/3 Actuarial + 1/3 Salary):	78,532	77,109	127,168	48,934	6,095,727
Actuarial Method as Percent of Salary Method:	55.73%	76.95%	94.74%	62.44%	100.00%
Phase-In Method as Percent of Salary Method:	70.49%	84.63%	96.49%	74.96%	100.00%
2017 Appropriation (Phase-In Method) Increase over 2016	-13.21%	-4.08%	2.49%	-9.95%	4.21%
2017 Appropriation (Salary Method) Increase over 2016	4.21%	4.21%	4.21%	4.21%	4.21%